



## Complete Summary

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### TITLE

Acute myocardial infarction: percent of patients without beta blocker contraindications who are prescribed a beta blocker at hospital discharge.

### SOURCE(S)

Specifications manual for national hospital quality measures, version 1.04. Centers for Medicare and Medicaid Services (CMS), Joint Commission on Accreditation of Healthcare Organizations (JCAHO); 2005 Aug. various p.

### Measure Domain

#### PRIMARY MEASURE DOMAIN

##### Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

#### SECONDARY MEASURE DOMAIN

Does not apply to this measure

### Brief Abstract

#### DESCRIPTION

This measure is used to assess the percent of acute myocardial infarction (AMI) patients without beta blocker contraindications who are prescribed a beta blocker at hospital discharge.

#### RATIONALE

The use of beta blockers for patients who have suffered an acute myocardial infarction (AMI) can reduce mortality and morbidity. Studies have demonstrated that the use of beta blockers are associated with about a 20% reduction in this risk. National guidelines strongly recommend long-term beta blocker therapy for the secondary prevention of subsequent cardiovascular events in patients discharged after acute myocardial infarction (AMI). Despite these recommendations, beta blockers remain underutilized in older patients discharged after AMI.

## PRIMARY CLINICAL COMPONENT

Acute myocardial infarction (AMI); beta blocker

## DENOMINATOR DESCRIPTION

Acute myocardial infarction (AMI) patients without beta blocker contraindications (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

## NUMERATOR DESCRIPTION

Acute myocardial infarction (AMI) patients who are prescribed a beta blocker at hospital discharge

## Evidence Supporting the Measure

### EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## Evidence Supporting Need for the Measure

### NEED FOR THE MEASURE

Overall poor quality for the performance measured

### EVIDENCE SUPPORTING NEED FOR THE MEASURE

Jencks SF, Cuerdon T, Burwen DR, Fleming B, Houck PM, Kussmaul AE, Nilasena DS, Ordian DL, Arday DR. Quality of medical care delivered to Medicare beneficiaries: A profile at state and national levels. JAMA 2000 Oct 4;284(13):1670-6. [PubMed](#)

## State of Use of the Measure

### STATE OF USE

Current routine use

### CURRENT USE

Accreditation  
Collaborative inter-organizational quality improvement  
Internal quality improvement  
Pay-for-performance

## Application of Measure in its Current Use

### CARE SETTING

Hospitals

### PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

### LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

### TARGET POPULATION AGE

Age greater than or equal to 18 years

### TARGET POPULATION GENDER

Either male or female

### STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

## Characteristics of the Primary Clinical Component

### INCIDENCE/PREVALENCE

Each year 900,000 people in the United States (U.S.) are diagnosed with acute myocardial infarction (AMI); of these, approximately 225,000 cases result in death and, it is estimated that an additional 125,000 patients die before obtaining medical care.

### EVIDENCE FOR INCIDENCE/PREVALENCE

American College of Cardiology, American Heart Association Task Force on Practice Guidelines, Committee on Management of Acute Myocardial Infarction. Ryan TJ, Antman EM, Brooks NH, Califf RM, Hillis LD, Hiratzka LF, Rapaport E, Riegel B, Russell RO, Smith EE III, Weaver WD. ACC/AHA guidelines for the management of patients with acute myocardial infarction: 1999 Update. Bethesda (MD): American College of Cardiology (ACC), American Heart Association (AHA); 1999. Various p.

### ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

## BURDEN OF ILLNESS

Cardiovascular disease, including acute myocardial infarction (AMI), is the leading cause of death in the United States (U.S.).

## EVIDENCE FOR BURDEN OF ILLNESS

French WJ. Trends in acute myocardial infarction management: use of the National Registry of Myocardial Infarction in quality improvement. Am J Cardiol 2000 Mar 9;85(5A):5B-9B; discussion 10B-12B. [PubMed](#)

## UTILIZATION

Cardiovascular disease, including acute myocardial infarction (AMI), is the primary disease category for hospital patient discharges.

## EVIDENCE FOR UTILIZATION

French WJ. Trends in acute myocardial infarction management: use of the National Registry of Myocardial Infarction in quality improvement. Am J Cardiol 2000 Mar 9;85(5A):5B-9B; discussion 10B-12B. [PubMed](#)

## COSTS

Unspecified

## Institute of Medicine National Healthcare Quality Report Categories

## IOM CARE NEED

Getting Better

## IOM DOMAIN

Effectiveness

## Data Collection for the Measure

## CASE FINDING

Users of care only

## DESCRIPTION OF CASE FINDING

Discharges, 18 years and older, with a principal diagnosis of acute myocardial infarction (AMI)

## DENOMINATOR SAMPLING FRAME

Patients associated with provider

#### DENOMINATOR INCLUSIONS/EXCLUSIONS

##### Inclusions

Discharges with an International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for acute myocardial infarction (AMI) as defined in Appendix A of the original measure documentation

##### Exclusions

- Patients less than 18 years of age
- Patients transferred to another acute care hospital or federal hospital
- Patients who expired
- Patients who left against medical advice
- Patients discharged to hospice
- Patients with one or more of the following beta blocker contraindications/reasons for not prescribing a beta blocker documented in the medical record:
  - Beta blocker allergy
  - Bradycardia (heart rate less than 60 beats per minute [bpm]) on day of discharge or day prior to discharge while not on a beta blocker
  - Second or third degree heart block on electrocardiogram (ECG) on arrival or during hospital stay and does not have a pacemaker
  - Other reasons documented by a physician, nurse practitioner, or physician assistant for not prescribing a beta blocker at discharge.

#### DENOMINATOR (INDEX) EVENT

Clinical Condition  
Institutionalization

#### DENOMINATOR TIME WINDOW

Time window is a single point in time

#### NUMERATOR INCLUSIONS/EXCLUSIONS

##### Inclusions

Acute myocardial infarction (AMI) patients who are prescribed a beta blocker at hospital discharge

##### Exclusions

None

#### NUMERATOR TIME WINDOW

Encounter or point in time

#### DATA SOURCE

Administrative and medical records data

#### LEVEL OF DETERMINATION OF QUALITY

Individual Case

#### PRE-EXISTING INSTRUMENT USED

Unspecified

### Computation of the Measure

#### SCORING

Rate

#### INTERPRETATION OF SCORE

Better quality is associated with a higher score

#### ALLOWANCE FOR PATIENT FACTORS

Unspecified

#### STANDARD OF COMPARISON

External comparison at a point in time  
External comparison of time trends  
Internal time comparison

### Evaluation of Measure Properties

#### EXTENT OF MEASURE TESTING

The core measure pilot project was a collaboration among the Joint Commission, five state hospitals associations, five measurement systems, and 83 hospitals from across nine states. Participating hospitals collected and reported data for acute myocardial infarction (AMI) measures from December 2000 to December 2001.

Core measure reliability visits were completed the summer of 2001 at a random sample of 16 participating hospitals across 6 states.

Preliminary pilot test data reveals a mean rate of 90% for this measure.

#### EVIDENCE FOR RELIABILITY/VALIDITY TESTING

Joint Commission on Accreditation of Healthcare Organizations (JCAHO). A comprehensive review of development and testing for national implementation of

hospital core measures. Oakbrook Terrace (IL): Joint Commission on Accreditation of Healthcare Organizations (JCAHO); 40 p.

## Identifying Information

### ORIGINAL TITLE

AMI-5: beta blocker prescribed at discharge.

### MEASURE COLLECTION

[National Hospital Quality Measures](#)

### MEASURE SET NAME

[Acute Myocardial Infarction](#)

### SUBMITTER

Centers for Medicare & Medicaid Services  
Joint Commission on Accreditation of Healthcare Organizations

### DEVELOPER

Centers for Medicare and Medicaid Services/Joint Commission on Accreditation of Healthcare Organizations

### ENDORSER

National Quality Forum

### INCLUDED IN

Hospital Compare  
Hospital Quality Alliance  
National Healthcare Disparities Report (NHDR)  
National Healthcare Quality Report (NHQR)

### ADAPTATION

Measure was not adapted from another source.

### RELEASE DATE

2000 Aug

### REVISION DATE

2005 Aug

## MEASURE STATUS

Please note: This measure has been updated. The National Quality Measures Clearinghouse is working to update this summary.

## SOURCE(S)

Specifications manual for national hospital quality measures, version 1.04. Centers for Medicare and Medicaid Services (CMS), Joint Commission on Accreditation of Healthcare Organizations (JCAHO); 2005 Aug. various p.

## MEASURE AVAILABILITY

The individual measure, "AMI-5: Beta Blocker Prescribed at Discharge," is published in "Specifications Manual for National Hospital Quality Measures." This document is available from the [Joint Commission on Accreditation of Healthcare Organizations \(JCAHO\) Web site](#). Information is also available from the [Centers for Medicare & Medicaid Services \(CMS\) Web site](#). Check the JCAHO Web site and CMS Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

## COMPANION DOCUMENTS

The following are available:

- A software application designed for the collection and analysis of quality improvement data, the CMS Abstraction and Reporting Tool (CART), is available from the [CMS CART Web site](#). Supporting documentation is also available. For more information, e-mail CMS PROINQUIRIES at [proinquiries@cms.hhs.gov](mailto:proinquiries@cms.hhs.gov).
- Joint Commission on Accreditation of Healthcare Organizations (JCAHO). A comprehensive review of development and testing for national implementation of hospital core measures. Oakbrook Terrace (IL): Joint Commission on Accreditation of Healthcare Organizations (JCAHO); 40 p. This document is available from the [JCAHO Web site](#).
- Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Attributes of core performance measures and associated evaluation criteria. Oakbrook Terrace (IL): Joint Commission on Accreditation of Healthcare Organizations (JCAHO); 5 p. This document is available from the [JCAHO Web site](#).
- Hospital compare: a quality tool for adults, including people with Medicare. [internet]. Washington (DC): U.S. Department of Health and Human Services; 2005 [updated 2005 Sep 1]; [cited 2005 Apr 15]. This is available from the [Medicare Web site](#).

## NQMC STATUS

This NQMC summary was completed by ECRI on February 7, 2003. The information was verified by the Centers for Medicare/Medicaid Services and the



Joint Commission on Accreditation of Healthcare Organizations on February 12, 2003. This NQMC summary was updated by ECRI on October 6, 2005. The information was verified by the measure developer on December 12, 2005.

#### COPYRIGHT STATEMENT

The Specifications Manual for National Hospital Quality Measures [Version 1.04, August, 2005] is the collaborative work of the Centers for Medicare & Medicaid Services and the Joint Commission on Accreditation of Healthcare Organizations. The Specifications Manual is periodically updated by the Centers for Medicare & Medicaid Services and the Joint Commission on Accreditation of Healthcare Organizations. Users of the Specifications Manual for National Hospital Quality Measures should periodically verify that the most up-to-date version is being utilized.

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